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für Montage- und
Prüfsysteme mbH

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New Claims:

1. A welding apparatus with two electrode carriers
which can be moved relative to one another by a drive
10 unit, can be mounted with electrodes and together with
the drive unit form an assembly which is mounted in a
floating position on at least one linear guide (1),
characterized in that the assembly is held in a base
position, from which the electrode carriers (6, 12) can
15 be transferred to the welding position, by means for
compensating for its weight, the drive unit being
formed by a servomotor (9), which can be used to drive
two spindles (8, 14) which are provided with opposing
screw threads, are arranged parallel to the linear
20 guide and engage with nuts assigned to the electrode
carriers (6, 12).

2. The welding apparatus as claimed in claim 1,
characterized in that it is equipped with a brake (20),
25 by which the assembly formed by the electrode carriers
(6, 12) and the servomotor (9) can be locked on the
linear guide (1).

3. The welding apparatus as claimed in claim 1 or 2,
30 characterized in that three carriages (2, 3, 4) are
mounted on the linear guide (1).

4. The welding apparatus as claimed in claims 2 and
3, characterized in that the carriage (3) connected to
35 the servomotor (9) can be locked by the brake (20).

5. The welding apparatus as claimed in one of claims 2 to 4, characterized in that a brake rail (18), which can be locked by a piston (19) of the brake (20), is connected to the carriage (3) carrying the
5 servomotor (9).

6. The welding apparatus as claimed in one of claims 1 to 5, characterized in that the servomotor (9) is arranged between the electrode carriers (6, 12).
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7. The welding apparatus as claimed in one of claims 1 to 6, characterized in that the spindles (8, 14) are connected, via clutches (10, 15), to opposite shaft stubs (11, 16) of the shaft of the servomotor
15 (9).

8. The welding apparatus as claimed in claim 7, characterized in that the clutches (10, 15) are designed as slipping clutches.
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9. The welding apparatus as claimed in one of claims 1 to 8, characterized in that the spindles (8, 14), which can be driven by the servomotor (9), engage with nuts at those ends of the electrode carriers (8, 12) which are remote from the electrodes (7, 13).
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10. The welding apparatus as claimed in one of claims 1 to 9, characterized in that the means for compensating for its weight are formed by at least one
30 spring (21).

11. The welding apparatus as claimed in one of claims 1 to 9, characterized in that the means for compensating for its weight are formed by a pneumatic
35 cylinder.

12. The welding apparatus as claimed in one of claims 1 to 11, characterized in that the linear guide (1) is provided with end stops (22, 23).